

Contact

www.linkedin.com/in/john-k-aa4a6123 (LinkedIn)

Top Skills

Matlab
Structural Engineering
Civil Engineering

Certifications

WHMIS
Working at Heights
P.Eng

Honors-Awards

George Cooper Entrance
Scholarship
Lester Bowles Pearson Scholarship
E.W.R. Steacie Scholarship
Clarence C. Gibson Scholarship
Vered Foundation Scholarship

Publications

OPTIMIZATION OF A POLYGONAL
HOLLOW STRUCTURAL STEEL
SECTION IN THE ELASTIC
REGION

COMPARATIVE EXPERIMENTAL
INVESTIGATION OF THE EFFECTS
OF LOCAL BUCKLING ON
POLYGONAL AND RECTANGULAR
HOLLOW STRUCTURAL
SECTIONS

Time and Frequency Domain
Analyses of the Hualien Large-Scale
Seismic Test

Detection of local buckling in thin-
walled hollow structural steel
sections using fibre optic and strain
gauge sensors

Comparison of the moment rotation
capacities of rectangular and
polygonal hollow sections

John K.

Engineering | Finance | Assistant Professor | Research
Canada

Summary

- Doctor of Philosophy in Structural Engineering. My research focuses on how to minimize local buckling in thin-walled hollow sections via experimental tests completed at Queen's University.
- Master's of Applied Science Degree in Structural Engineering. My research focused on the seismic analysis of a reinforced concrete nuclear power plant structure using the time and frequency domain analysis methods, and was completed in collaboration with Sargent and Lundy LLC, Boston, Chicago.
- Bachelor's Degree in Civil Engineering at Carleton University with numerous awards for academic success.
- Worked as an engineering intern with the National Research council of Canada and tasks included design and testing of building envelopes.
- Well developed problem solving, organizational and communication skills exhibited through the completion of six placements as a Teaching Assistant at Carleton University, University of Toronto and Queen's University.
- Acquired and applied skills in graphical design and finite element modeling using programs such as ANSYS, SAP, AutoCAD, MIDAS GTS, OpenSees, FORTRAN and Pro Engineer and an avid user of Visual C++, Visual Basic Applications, Microsoft Office Applications, Maple, Tcl/Tk and MATLAB.
- Design Codes: CISC S16-10, NBCC 2010, CSA A23.3

Experience

Lancaster Investment Management

Machine Learning Engineer

March 2024 - Present (8 months)

S&P Global Market Intelligence Integration

Loyalist College

Assistant Professor

August 2021 - Present (3 years 3 months)

Ontario, Canada

Deterministic Models and Optimization, Business, Finance, FinTech,
Organisational Behaviour, Blockchain and Tokenisation in the Real Estate
Industry

Ankor Engineering Systems Ltd.

11 years 1 month

Director

March 2020 - Present (4 years 8 months)

Toronto, Ontario, Canada

Structural Engineer

October 2013 - March 2020 (6 years 6 months)

Toronto, Canada Area

Main Projects:

a) Trump Tower and U - Condominium:

- Design and analysis of the recently proposed polygonal HSS steel cantilever system for the Trump Tower and U-condominium, Toronto, CA.

b) Sony Centre Building (L-Tower):

- Design, analysis and 3D modeling of the polygonal HSS steel cantilever and support system for L-Tower building, Toronto, CA
- Conducted inspections to verify the design specifications

okom wrks labs

Co-Founder and VP of Engineering

December 2021 - Present (2 years 11 months)

The IBET PhD Project

Mentor

September 2021 - Present (3 years 2 months)

Canada

Royal Military College of Canada/Collège militaire royal du Canada

Assistant Professor

November 2021 - April 2024 (2 years 6 months)

Kingston, Ontario, Canada

Structural Theory - CEE 305

Strength of Materials - CEE 303

Queen's University - Faculty of Engineering and Applied Science

3 years

Doctoral Researcher in Partnership with BioDiffusion Technologies Inc.
June 2020 - May 2023 (3 years)

Assistant Professor

January 2021 - April 2022 (1 year 4 months)

Lecturer - Applied Engineering Mechanics

July 2020 - December 2020 (6 months)

Canada

Panel Member - Let's Talk Race in STEM

June 2020 - December 2020 (7 months)

Fourth Pig Green & Natural Construction

Engineer - Passive Home Designs in Collaboration with Tooketree
Passive Homes

July 2022 - March 2023 (9 months)

Structural Design and Project Management

University of Oxford

2 years 1 month

Panel Member - Creating a Sustainable Platform

August 2019 - July 2020 (1 year)

Oxford, United Kingdom

Research Fellow: Smart Cities - Oxford Future of Real Estate Initiative

May 2019 - October 2019 (6 months)

Oxford, England, United Kingdom

<https://www.sbs.ox.ac.uk/news/property-tech-30-ground-breaking-report-looks-future-real-estate>

Clubs and Oxford Business Networks Officer

October 2018 - September 2019 (1 year)

Oxford, United Kingdom

MBA Candidate, Saïd Business School-Distinction in Accounting,
Business Finance and Firms & Markets

July 2018 - September 2019 (1 year 3 months)

Lea Manor High School

Teacher

February 2019 - March 2019 (2 months)

Luton, United Kingdom

Sargent & Lundy

Graduate - Structural and Geotechnical Engineering

August 2011 - November 2013 (2 years 4 months)

Toronto, Canada Area

Master's of Applied Science - Structural and Geotechnical Engineering. My research project involved the soil-structure interaction analysis of a nuclear power plant concrete structure in the frequency and time domain. In the nuclear and geotechnical industries, the frequency domain method is the preferred technique for soil-structure interaction analyses due to its ease of use. However, as was shown in this research study, the frequency domain is only an approximation and the time domain method is more accurate and thus should be the preferred method of analysis. The analyses were carried out in collaboration with Sargent and Lundy, LLC.

University of Toronto

Teaching Assistant and Research Assistant

September 2011 - September 2013 (2 years 1 month)

Toronto, Canada Area

Taught Structural Analysis, and Structural Dynamics.

Tasks included creating and marking assignments, preparing worked examples, presenting examples to the class (chalk and talk), coordinating, and answering student questions.

Carleton University

Teaching Assistant and Research Assistant

July 2008 - August 2011 (3 years 2 months)

- Completed laboratory tests such as concrete compression and soil shear strength tests to study the evolution of pile-soil interface strength with time in soft clay.
- Taught second year Multivariable calculus and through the verbal interaction with the students, I greatly improved my communication skills.

National Research Council Canada / Conseil national de recherches Canada

Design of Building Envelopes

January 2010 - September 2010 (9 months)

Ottawa

- Carried out research on the design of building envelopes, the roofing system in particular.
- Completed tensile tests to determine the effect of dynamic wind loads on roofing systems and determined/verified the air permeance of common building materials.
- Designed and automated the data acquisition software for the SIGDERS research program.

Halifax Regional Municipality

Engineering Assistant

September 2009 - January 2010 (5 months)

Halifax, Canada Area

- Conducted traffic data surveys within the city of Halifax to comply with the provincial safety regulations. This greatly improved my transportation and traffic knowledge and skills.
- Developed good fieldwork and teamwork skills and improved my information mapping, basic drafting, technical filing skills and learned how to effectively communicate with clients and other professionals.

Agriculture and Agri-Food Canada

Environment Officer

April 2009 - September 2009 (6 months)

- Inspected chemical storage tanks and studied the effects of storage tank leaks/spills on the environment.
- Gained experience using the Storage Tank Regulations code, the National Fire Code and the Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.
- Reviewed several Storage Tank Engineering reports and gained experience in writing reports and engineering user manuals.

HDR

Volunteer work - Data collector and Analyst

2009 - 2009 (less than a year)

Ottawa

- Analyst

Education

Queen's University

Doctor of Philosophy - PhD, Structural Engineering · (2015 - 2020)

University of Oxford

Master of Business Administration - MBA · (2018 - 2019)

University of Toronto

Master's of Applied Science, Civil Engineering - Structural and Geotechnical Engineering · (2011 - 2013)

Carleton University

Bachelor of Engineering (B.Eng.) - Co-op, Civil Engineering · (2006 - 2011)